Using ArcCatalog to Create and Maintain FGDC Compliant Metadata

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What is Metadata?

- Data about data.

- Metadata describes:
  - who
  - what
  - where
  - when
  - how
  - … and much more...

Why use

MANDATED by Executive Order 12906.

- Gives integrity to your geospatial data.
- Reduce duplication of data collection and production.
- Maximize investments in geospatial data.
- Facilitates in successful data sharing and transfer.
- Development costs are low.

Executive Order 12906 (April 11, 1994)

Requires Federal agencies to use the FGDC metadata content standard to document digital spatial data.

NGB Response to EO12906

- ARNG personnel in all 54 States/Territories must comply with EO 12906.

- All existing geospatial data must be FGDC compliant by 01 March 2002.

- All new geospatial data created by ARNG personnel or through contractors must be FGDC compliant.

Army Range Sustainment Integration Council (ARSIC) (Aug 2001)

- Requires all Installation GIS programs to participate in an Enterprise approach.
- All existing and new geospatial data must have FGDC-Compliant Metadata.
- Includes linking metadata to a searchable NSDI Clearinghouse node.

-MG VanAntwerp (ACSIM) and
LTG Miller (DCSOPS-Director of Training)

What is the FGDC?

- Federal Geographic Data Committee (FGDC) is an interagency committee from 17 Federal agencies.

- Organized in 1990 to promote the coordinated use, sharing, and dissemination of geospatial data on a National basis.

- Develops geospatial data standards for implementing the NSDI.

Why use the FGDC Standard?

- All government agencies that receive federal funds to create metadata are mandated to follow the FGDC standard.
- Serves as a style guide for geospatial metadata.
- Allows for a uniform search process.

FGDC Document Organization

Divided into seven main sections...

1. Identification
2. Data Quality
3. Spatial Data Organization
4. Spatial Reference
5. Entity and Attribute
6. Distribution
7. Metadata Reference

… and Three Supporting Sections

1. Citation Information
2. Time Period Information
3. Contact Information

- These sections provide a common method
  to define citation, temporal and contact information.

FGDC Elements of Definition

The standard is organized into a series of elements that define information content.

- *Sections* (numbered chapters).
- *Compound Elements* (group of related elements).
- *Data Elements* (descriptive elements that the user fills in).

How are FGDC Elements Grouped?

- *Mandatory* - elements must be provided.
- *Mandatory if Applicable* - elements must be provided if the data set exhibits the characteristic defined by the element.
- *Optional* - elements are provided at the discretion of the data set producer.

Getting Help

Content Standard for Digital Geospatial Metadata Workbook

NSDI Web site at *www.fgdc.gov/metadata*

- Provides a better understanding of the FGDC standard.
- Provides graphical representation of FGDC metadata structure.
- Details Section, Compound, and Data elements.
- Details Mandatory, Mandatory if applicable, and Optional components.

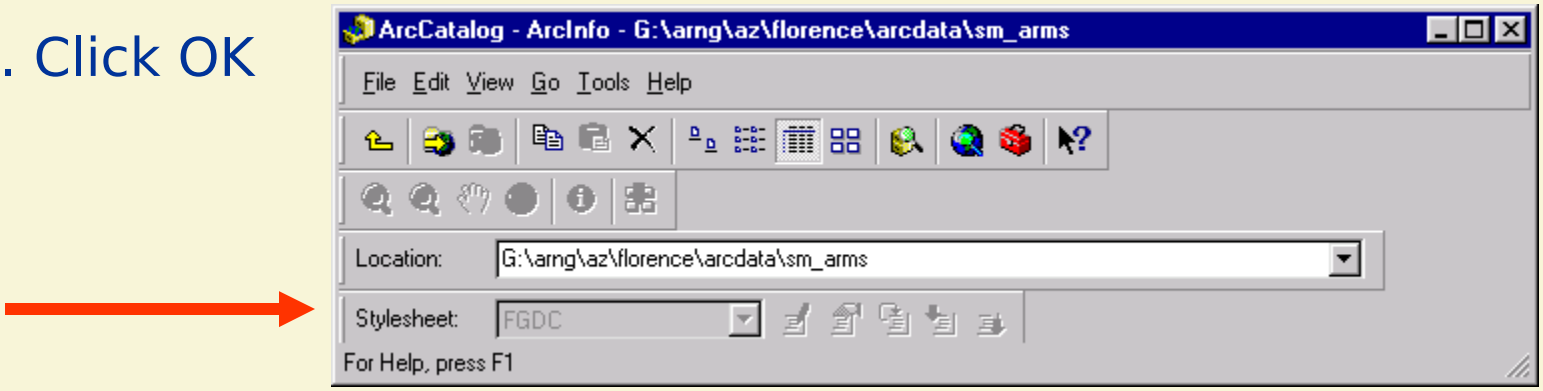
Why Use ArcCatalog as Your Metadata Tool?

- Metadata is saved with the spatial data in .xml format.
- Create metadata for all ESRI supported data formats.
- Includes a FGDC-compliant metadata editor.
- Generates and updates basic metadata information.
- Can create and use customized templates.
- Can import and export to a variety of formats.

Creating Metadata Using ArcCatalog

How to Apply FGDC Editor Settings

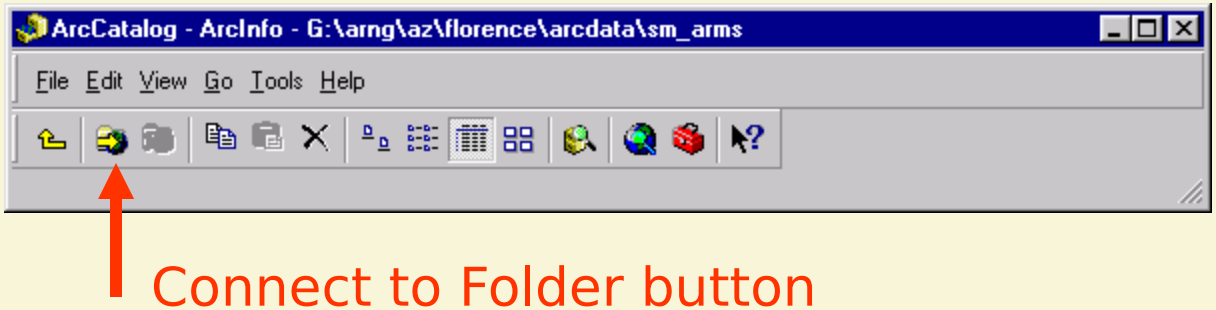
1. Open ArcCatalog
2. Click the Tools menu and click Options
3. Click the Metadata tab
4. Click the Default Style sheet dropdown arrow and click FGDC
5. Click the Metadata Editor dropdown arrow and click the FGDC editor
6. Leave all other default values/check boxes
7. Click OK



How to Connect to a Folder

1. Click the Connect To Folder button.
2. Navigate to the folder you want to add to the Catalog.
3. Click OK.

A new folder connection appears in the Catalog tree.

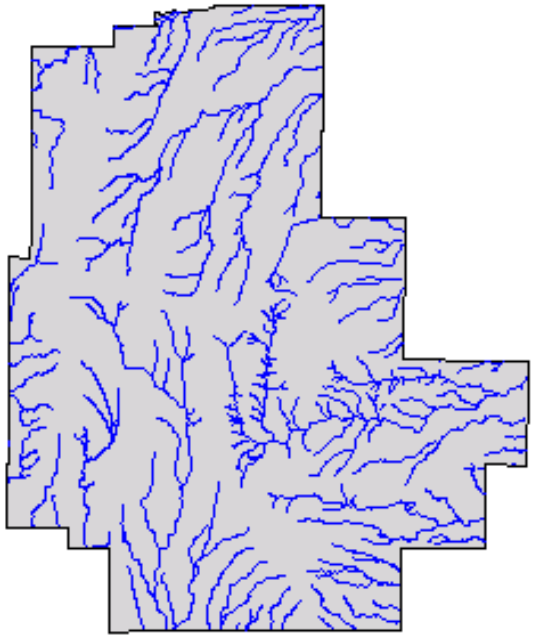


Sample Data File

Military Installation: Limestone Hills,
Montana Army National Guard

Data Source: USGS 7.5 Minute Quadrangle
Townsend, Montana

Data File: hydro.shp



Data Checks Prior to Metadata Creation

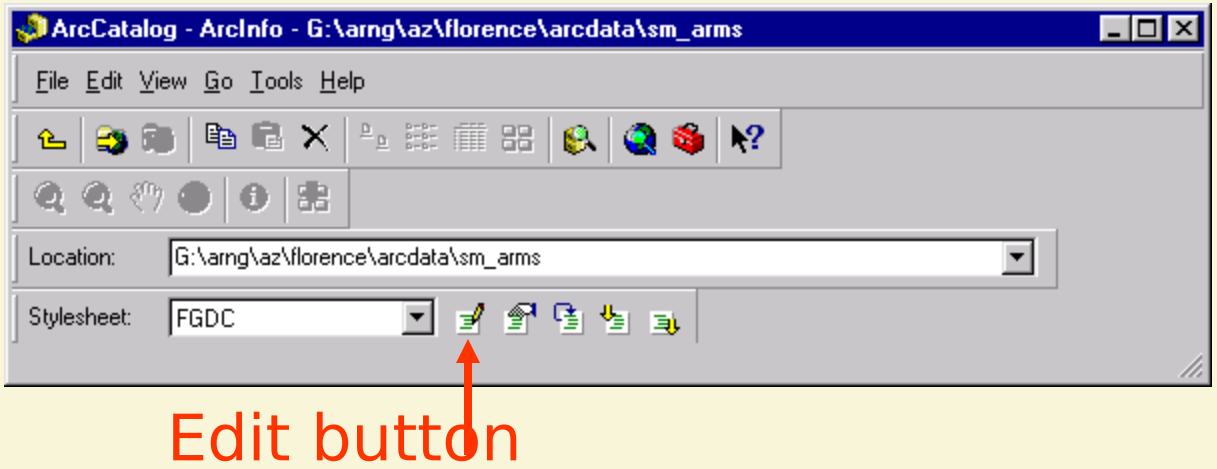
1. For shapefiles and coverages, make sure the spatial file has a projection.

2. For coverages, make sure the spatial file has topology.

3. Ensure all spatial and tabular updating are complete.

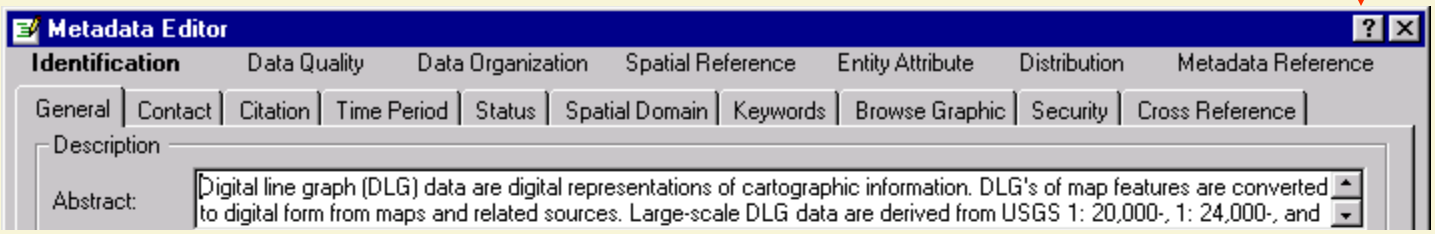
How to Create a Metadata File

1. In the tree on the left side of your screen, navigate to where data layer is located.
2. In the tree, click the layer of interest once to select.
3. Click the Metadata tab in the window next to the tree. This crea a non-specific metadata file that needs additional input for FGDC compliance.
4. Click once on the Edit button on the Metadata Toolbar to open t editor window.
5. All items that are required for FGDC compliance are noted in RE with the heading “REQUIRED”.

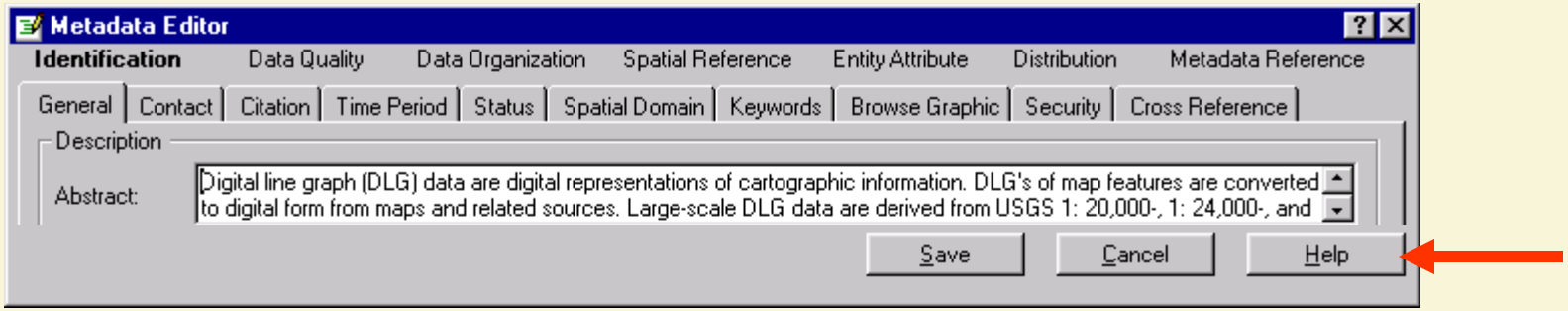


Getting Help in the Editor

Clicking the ***?*** button in the editing window



Clicking *Help* (or the F1 key) in the editing window provides FGDC standard information



Creating Metadata in ArcCatalog Using a Template

How to Create Metadata Using a Customized Template

1. Ensure that the template .xml file is saved to your workspace other appropriate location on the network. For this example, use the dlg_cemml.xml template.

2. Ensure that ArcCatalog has connections established to the fo where your GIS file(s) and the .xml template are stored.

3. In the Catalog tree, navigate to where your data layer is locat

4. In the Catalog tree, click the layer of interest once to select.

Continued

5. Click the Metadata tab in the window next to the tree. (A non-specific metadata .xml file is created).

6. On the Metadata toolbar (next to the Style sheet list), click the Import Metadata button (the fourth button from the left).

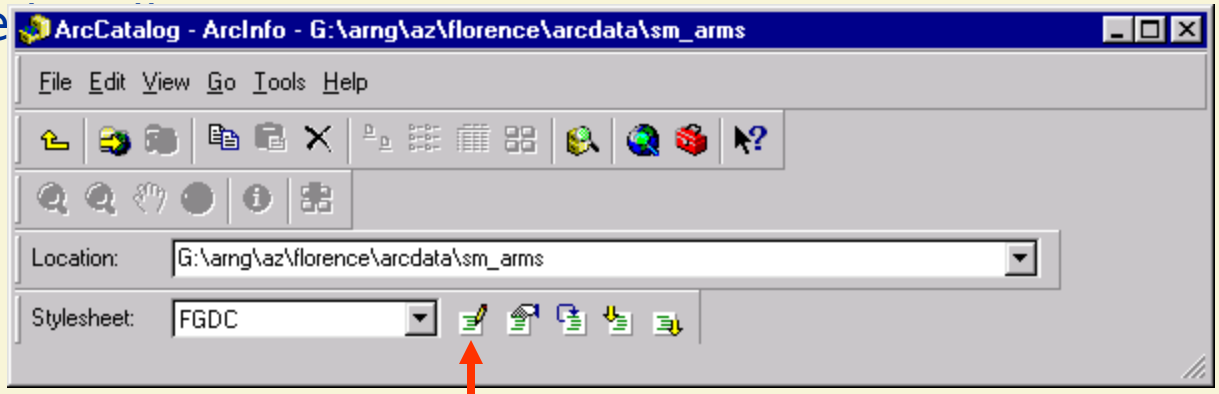
7. In the Import Metadata pop-up window, choose ".xml" as the file's format and then browse to where your template is saved.

8. Click OK. The resulting metadata file will contain all automatically populated spatial information and all USGS specific information populated in the template.

The metadata file will need minor editing (contact person name, attribute details, etc.). In addition, a few fields noted with “REQUIRED” will need to populated. These required elements are necessary for FDGC compliance and must be completed.

To complete the metadata:

1. Click once on the Edit button on the Metadata Toolbar to open the editor window.
2. All items that are required for compliance are noted in RED text with the



Creating a Customized Template

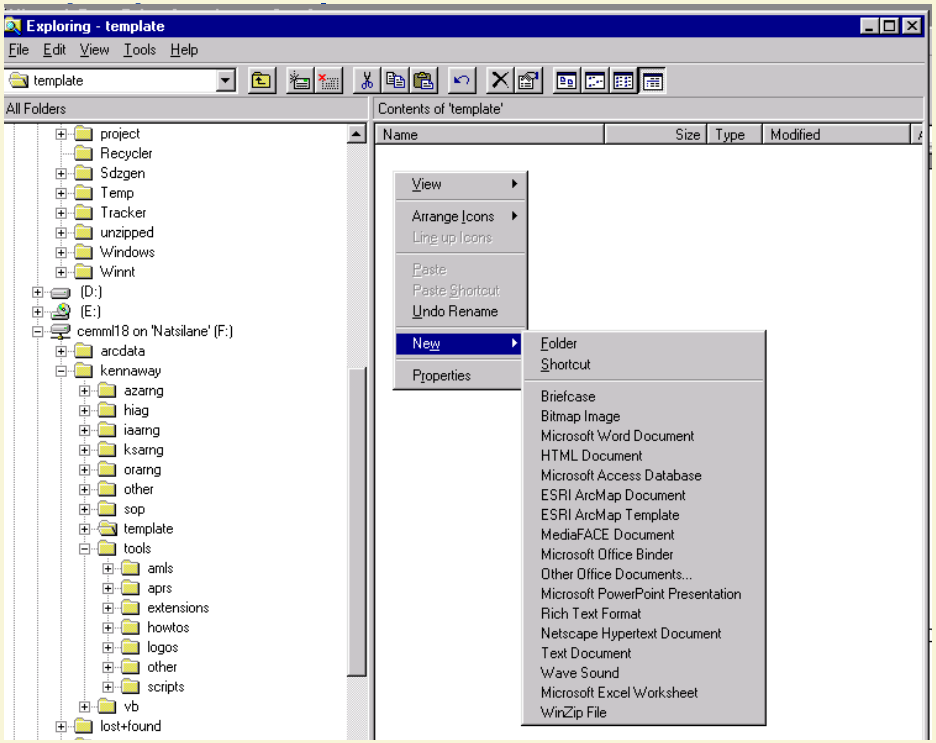
Creating a Template from Scratch

1. From Windows Explorer, navigate to the appropriate directory where you would like to save your custom template

2. Open the directory by double clicking on the folder

3. Right click in the contents
   Document

4. Rename the new .txt file



Continued

5. Open ArcCatalog and navigate to where you saved your text file.

6. Click on the file once to select it in the tree.

7. Click the Metadata tab in the right window (ArcCatalog will now create a general metadata file from your text file using your default style sheet (FGDC).

8. Click on Edit in the Metadata toolbar to begin editing the file.

9. Add descriptive information by typing directly or cutting/pasting from other documents.

Continued

10. When finished adding text to the metadata file, click Save.

11. Click the Export Metadata button in the toolbar.

12. Choose .xml in the pop-up window's drop-down list.

13. Browse to where you want to save your new .xml template.

14. Delete your original text file.

*You now have a customized template .xml file that can be imported for any spatial data file's metadata.

Importing a SMMS Metadata File into the ArcCatalog/.xml Tool

Part I

In SMMS, export metadata file to .txt or .sgml format.

1. File>Export

2. Choose *.txt or *.sgml as file type.

3. Navigate to where you want the new file to be saved.

Part II

In ArcCatalog, import the .txt or .sgml metadata file.

1. In the tree, navigate to where your spatial data file is located.

2. Click once to select it.

3. Click the Metadata tab.

4. Click the Import Metadata button.

5. Choose the appropriate file type (.txt or .sgml).

6. Navigate to where the file is stored.

7. Click OK.

*The resulting .xml file contains all the information present in the original SMMS file.